

Universitat de Lleida

TREBALL FINAL DE GRAU



ESCOLA
POLITÈCNICA SUPERIOR
UNIVERSITAT DE LLEIDA
INSPIRING THE FUTURE

Estudiant: Jordi Boronat Garcia

Titulació: Doble Grau en Enginyeria Informàtica i ADE

Títol de Treball Final de Grau: CRM 365 analysis and integration into a company

Codirectors: Xavier Clua Alos y Margarita Moltó Aribau

Presentació

Mes: Juny

Any: 2020

Acknowledgments

Even though all the difficulties and troubles that I had during this journey, that made me learn a lot in my field and I want to thank my whole CRM department that helped me to know more about our tool and its functionalities.

I will also thank Xavi Clua Alos, that once he has agreed to be my IFR tutor, I knew that this would be a huge advantage for me. His years of experience and his expertise could bring a lot to my final project, and so it did. Also, he helped me to realise all the fields and differences in our company software.

And last but not least I will like also like to thank Marga Moltó Aribau for constantly encouraging me in order to not give up and have a nice final project and the end. She also knew the way of structuring a final project perfectly.

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Abbreviations and Definitions

General definitions and abbreviations

CRM: stands for Client Relationship Management.

ERP: Enterprise Resource Planning.

F&Ops: Dynamics 365 Finance and Operations, it's Microsoft's ERP on the cloud.

Sql: Structured Query language. Programming language that is used to form queries in order to retrieve data from a database.

S.L.: "societat limitada", company that has a minimum capital of 3.000€ and its responsibility is limited to the capital that the shareholder has invested in the company. [10]

S.A. "societat anònima", company that has a minimum capital of 60.102€ and its responsibility is not limited to the capital invested. This means that if the company fails in bankruptcy, its debt must be paid by the shareholders, even if this value is greater than the company's debt. [10]

Concrete CRM definitions

Business unit: it's a way to differentiate several companies in the same CRM.

CE: Dynamics 365 Customer Engagement

Dataflow: movement of data from a source to a destination.

Entity: table of data inside CRM. They are used to model and manage business data in CRM.

Plugin: development inside CRM that provides us with a new functionality that CRM 365 didn't have by default.

1. INTRODUCTION

This document aims to highlight the details of the development of the project that our company (the company where I am working) will do, as well as its validations from the client, HIDRO, in order to install and adapt CRM 365 to this client.

My motivation to do this project started because of my job. I am working in a software consulting company from Lleida which aims to sell Microsoft Products and install them on any company. These software are mostly Enterprise Resource Planning (ERP) and Client Relationship Management (CRM). I am in the CRM department and I am member of the team who will carry on the CRM development on a specific company (named HIDRO), so I thought it would be a great idea make a final project about it.

The company where we implement the software, called HIDRO, is a group of companies that operate in different phases of electricity generation.

We will introduce a proposal to present the effective implementation of a modern and powerful solution, which include commercial management and marketing.

Although the initial scope is limited to commercial and marketing management, our company, as a global partner of Microsoft cloud services, will support HIDRO in all areas.

The proposal involves the implementation of two differentiated CRM services, in the HIDRO company. These two CRM services will be used by the two HIDRO companies:

- HIDRO DISTRIBUCIÓ S.L. (inside CRM, this company will be identified as HidroDis) HidroDis is identified with the Electricity Distribution part, made up of managers and operators who will manage and carry out all the field and street performances.
- HIDRO PRODUCTORA ELÈCTRICA S.A. (inside CRM, this company will be identified as HidroCom): HidroCom is the marketer of electricity, and consists of an administration team and other billing teams
- HIDRO DISTRIBUCIÓ DE GAS S.L. HIDRO also has a small division of clients that just use gas distributions, that ones will be called HidroGas and will be in the same CRM as HidroCom.

We must explain that these names are not real and are used to maintain the confidentiality of the client company.

This proposal is presented for the effective implementation of a modern and powerful solution, commercial management and marketing.

Although the initial scope is limited to commercial management and marketing, our company, as a global partner of Microsoft cloud services, will support HIDRO in all areas in which the solution has an effect on the company, from systems to Microsoft Office automation.

Every project from the smallest to the largest, has these three key elements a starting point with. Whether a call, an email or a simple contact gives the starting shot in a project, this aims to be a successful project. The effort of the work days will be transformed into an efficient solution and totally adapted to the needs of the customers that we will have forward during weeks of collaborative work, and that will mark a before and after in day-to-day of HIDRO and the way in which the company works.

Providing a solution is not just about setting up a product, but that everything goes much further: knowing the product, knowing how to understand and empathize, listening to the needs of the other, understanding their problems and feeling them as your problems and your requirements.

Being part of the great family that is to be Microsoft's partner, often comes the idea that the digital transformation that once began as a revolutionary leap into the future, has come the time when this transformation is no longer a challenge to achieve, if not a task that if it has not already been carried out, is essential to continue navigating.

The different product solutions offered today, whether financial or commercial, provide this digital transformation that can facilitate and even be the trigger for change in a company.

What can these solutions provide to make a difference? The advantages are wide, especially when it comes to data analytics and their exploitation, especially in the area of CRM, which is what we will go into in depth; they also give us dynamism and agility in the way we work, look for simplicity and the constant updating of information, etc.

Also, minimize duplication of work, as most tools are presented as a unified workspace, where from the same place I can manage the incidents I am receiving through a client portal, and at the same time, from the same app, follow the email thread I am maintaining with these clients.

Starting a project always gives you that feeling of starting something new, that concern to know who do you have sitting in front of you to give him a fully adapted solution, and to set up a standard tool to the particularities of each client.

But like everything, it goes further; we will start a few weeks of constant and daily work, project management, direction, technical and functional analysis, know perfectly the client you have in front of you, what is your day to day, what are your needs and their requirements, what their problems are, and so on. But also, what are its keys to success, what are its potentials and what are its shortcomings. And at the same time, as has already been said, everything is like a whole gear, like the case of a clock, and the presentation of a totally adapted solution is not conceived, without a technical part to be developed. Therefore, it will also be essential to enter the customer's home, analyse the data and define a technical analysis so that all the information that is needed by the customer is visible and available in the CRM.

We must not forget the human factor, a project is not only configurations, parameterizations, databases, figures and deadlines to be met, but also empathy, and collaborative work; to know how to listen and understand the needs of the client and at the same time, to have the rapid ability to translate these needs into solutions that the application can and will offer.

So, what starts with a proposal and the sale of a Microsoft product, has a set of elements of equal value and importance, because not considering any of it can make this initial project end in a failure.

That is why during the whole project which we will see in the following pages, we will analyse not only the product offered as a solution, but also key elements such as the human team that carries out the implementation of this project, the management and task planning, and of course, the configuration and parameterization of the tool according to the needs transferred.

Throughout this project we will analyse the proposal and the project that has been carried out with HIDRO, a proposal that involves the implementation of two CRM services, one for HidroDis and HidroCom (this will be explained in detail), a marketer and distributor of light, through the which is intended to ensure a connected and unified management of incident management.

This proposal is presented as an effective and modern implementation, powerful and dynamic for both business management, customer service and marketing, with the ultimate goal of obtaining a rapid profit that allows HIDRO to continue to grow digitally and start the much-needed digital transformation, which aims to achieve greater profitability and effectiveness in everyday life.

As we will go into detail, it should be considered that the CRM solution which will be analysed below, is presented as a solution for business management and customer service, but be part of the Dynamics 365's great family goes much further. IFR as a global Microsoft partner of services in the cloud, will give all the necessary support to HIDRO in all its areas where the solution may have an impact.

With a sign in the proposal begins this whole project, an entertaining journey, full of effort, and the occasional hurdle. The client will acquire a license, which opens the door to Microsoft Cloud and with its payment for use, HIDRO begins its path towards digital transformation; the gear starts running.

This project will be divided, according to the description of the project, as well as all its implementation. We will also discuss the client characteristics.

The structure of this document will be the following:

2.ANTECEDENTS AND OBJECTIVES (ABOUT HIDRO AND IMPLEMENTING D365)

I will explain what is HIDRO about, and what will they get using CRM. Also, in chapter 2.1.1 a small finance structure will be showed.

3.CRM EXPLANATION

What is a CRM?

What is CRM history?

You will find the answers to these questions and a detailed description of CRM 365 and its modules on this chapter.

Also, on 3.3 I will review the advantages of having CRM 365 and why use CRM 365 and not other CRMs.

4.DATA INTEGRATION

Here it will be explained how in our company we deal with data integrations. Mostly, why do we need to integrate data and our ways to do it.

5.INTEGRATION PROPOSAL

Here I will explain the whole process of implementing CRM, from getting to know the client to installing the software.

In 5.3, we will see how the CRM team works and how did we manage this project from the begging to its very end.

At the end on chapter 6 we can see the conclusions.

2. ANTECEDENTS AND OBJECTIVES (ABOUT HIDRO AND IMPLEMENTING D365)

Starting a project means much more than implementing a solution or a product. It is key and essential to understand the situation of the customer that we are dealing with; know how the client works so far and how they want to work; this is the starting point of any project, because without this premise it would not be possible to start it, let alone complete it successfully.

2.1. HIDRO

HIDRO is a company that distributes, produces and sells electricity. They use hydroelectrical factories to transform the energy of water into electric energy.

Currently, HIDRO has approximately 1,400 partners holding company shares.

HIDRO was born in 1894. The company started just with one windmill and used it to generate electricity. It was in 1950, when many windmills disappeared, and the company started to use hydroelectric turbines.

During this long history, HIDRO has always maintained its initial objectives. On the one hand, by providing a quality electricity supply, using renewable energy sources. And on the other, making its activity have a marked social impact in the region.

In this sense, it is worth noting the company's commitment to promoting renewable energy, as evidenced by the fact that currently all the energy marketed by HIDRO is 100% renewable in origin. A significant part of this energy comes from the three HIDRO hydroelectric plants.

On the other hand, in the social field, the company has historically collaborated with different regional entities for charitable and social purposes. In recent years, HIDRO has implemented different measures to support people who have difficulties in dealing with their energy expenditure, with the aim of reducing, as much as possible, the possible energy poverty in their area. of influence.

Like many other companies, HIDRO is currently immersed in a process of change and technology implementation, where the automation of the daily tasks that its workers carry out on a daily basis is of great importance to the company.

This is not only important in order to facilitate the electric workers' job, but also to obtain, the maximum information of daily work, and extract from this information, business actions or changes in strategies, aimed to obtain greater productivity and profitability using this information.

2.1.1. *HIDRO's FINANCIAL STRUCTURE*

Financially speaking, it is divided in three main companies, as we said on the Introduction.

HIDRO DISTRIBUCIÓN S.L. has a capital of 9.835.765 € and its total Assets are valued in 16.677.600€. Their Assets are so high because it's an electricity manufacturer so they need to have a lot of machinery and industries in order to produce energy. It has 14 employees.

We will analyse all the financial data using Sabi (Sistema de Balances ibéricos) database. It's a database that gives us financial information about many companies and can be used through our university.

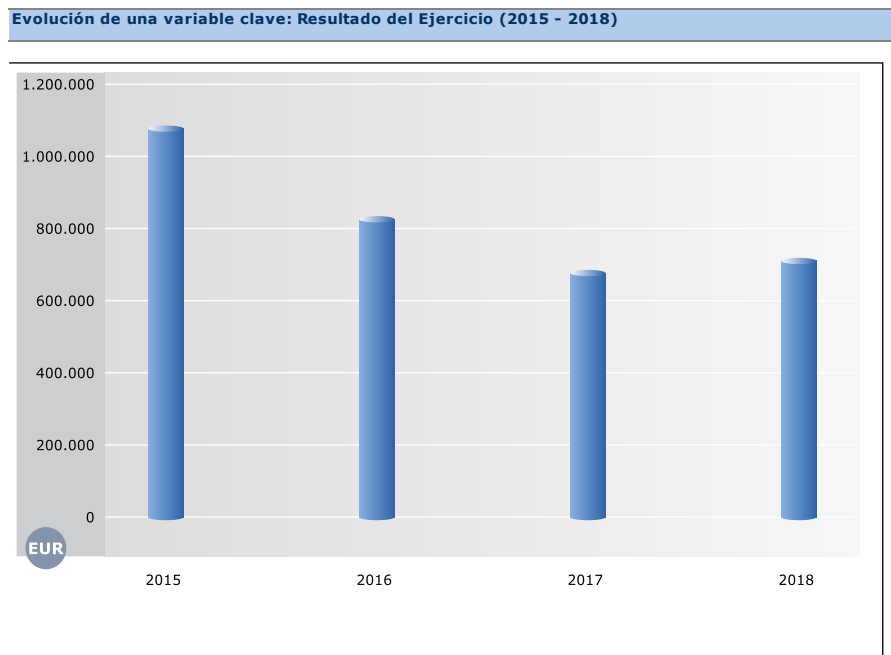


Table 1. HIDRO DISTRIBUCIÓN S.L. Financial Results Source: Sabi Database

The benefits on this company have decreased since 2015 (see Table 1), although is starting to recover in 2018. As we will see later, CRM can help this company in this way, because CRM is a tool that its main objective is to gain new clients and maintain the old clients. And if we have new clients we have the possibility to increase our income and our benefits.

Also, HIDRO DISTRIBUCIÓN S.L. shares are 100 % owned by HIDRO PRODUCTORA ELÉCTRICA S.A.

HIDRO PRODUCTORA ELÉCTRICA S.A. has a capital of 8.400.000 € and his assets are worth 19.776.515 €. Their assets are high for the same reason that are high on HIDRO DISTRIBUCIÓN S.L. It has 29 employees.

Evolución de una variable clave: Resultado del Ejercicio (2015 - 2018)

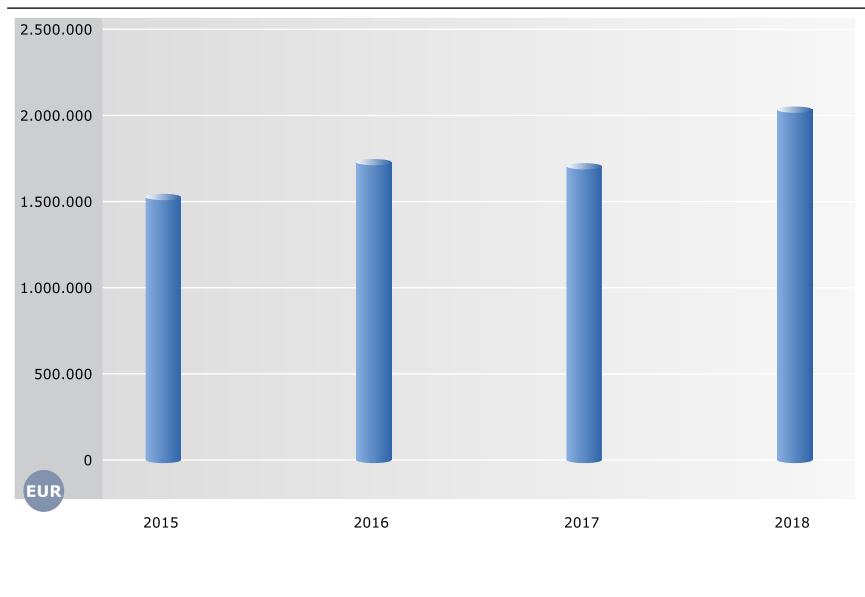


Table 2. HIDRO DISTRIBUCIÓN S.L. Financial Results Source: Sabi Database

Financial ratios

In order to know the financial status of the company we will analyse the following ratios:

Return on asset (ROA):

Return on asset ratio, also known as economic profitability ratio, measures the profit generated by the assets without considering the cost of financing them, that is, it allows us to know if the growth of a company is accompanied by an improvement or deterioration in the result. [6]

It is calculated in percentage, dividing earnings by total assets.

As we can see on Table 3, the last HIDRO DISTRIBUCIÓN S.L. ROA ratio that we can check was 5.62%. Over these years it's been decreasing but it's recovering in 2018, same as benefits.

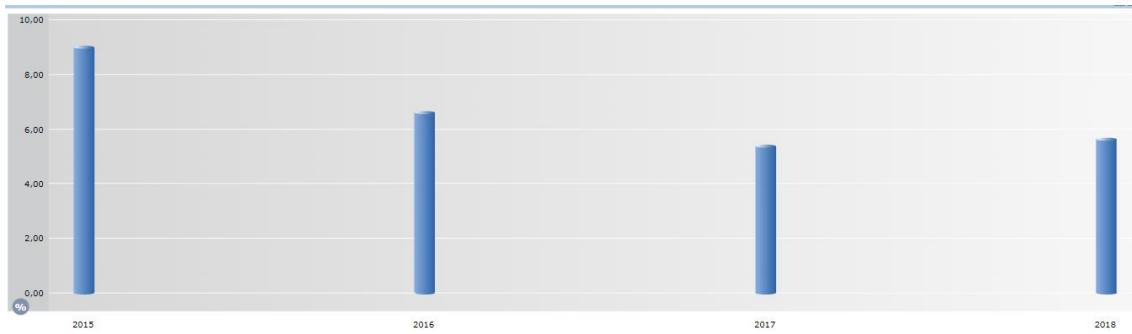


Table 3. HIDRO DISTRIBUCIÓ S.L. ROA. Source: Sabi database

As we can see on Table 4, the last HIDRO PRODUCTORA ELÈCTRICA S.A. ROA ratio that we can check was 11.07 %. On this company, the ratio is incrementing every year, that means that within HIDRO, this is the most profitable division (by assets).

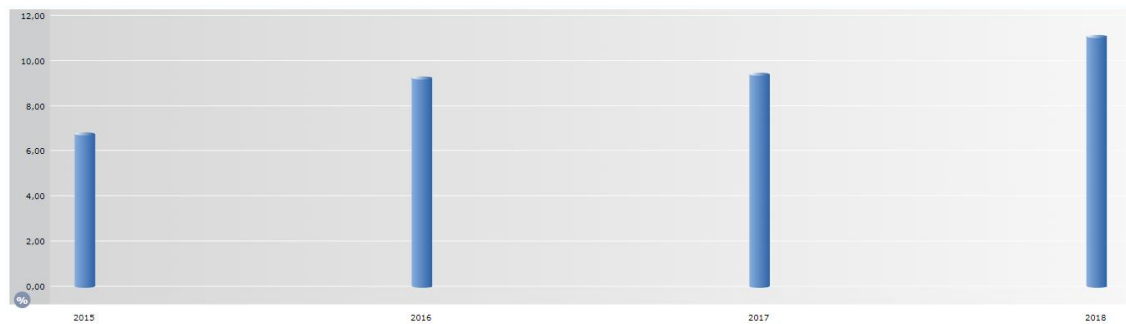


Table 4. HIDRO PRODUCTORA ELÈCTRICA S.A. ROA. Source: Sabi database

This shows us a good result. The greater this ratio is, it will show a greater assets' performance.

Return on Equity (ROE)

Return on Equity, is also known as financial return by the name which relates the net profits obtained in a given investment operation with the resources necessary to obtain it. [7]

ROE is calculated by dividing the net profit of a company by its own resources. End-of-period profit and own resources at the beginning of the period (or end of the previous period) are used because we want to know the profitability we have had from the resources invested at the beginning of the period.

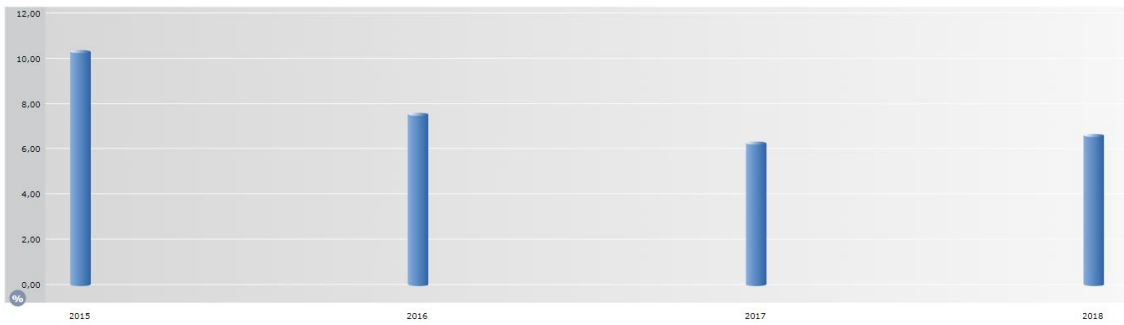


Table 5. HIDRO DISTRIBUCIÓ S.L. ROE. Source: Sabi database

The last HIDRO DISTRIBUCIÓ S.L. ROE that we can check was 6.58% (see Table 5. The ROE is decreasing every year until 2018. This percentage shows the same evolution like ROA, that's because both are related to a company benefits, although ROA measures this using value asset.

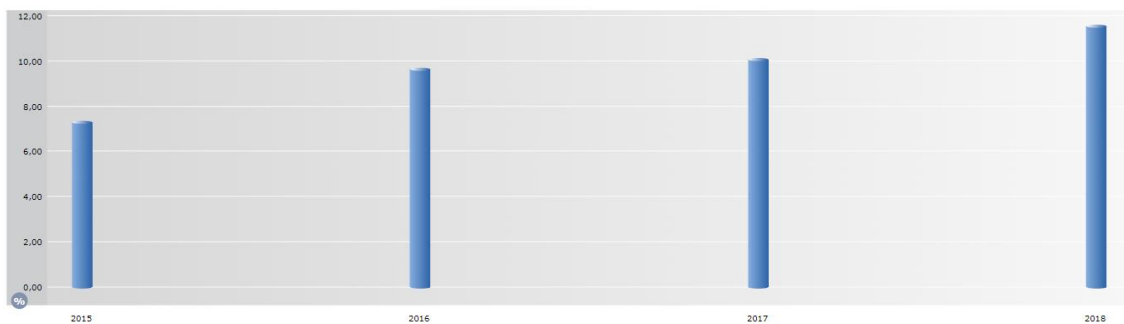


Table 6. HIDRO PRODUCTORA ELÈCTRICA S.A. ROE. Source: Sabi database

As we can see on Table 6, the last HIDRO PRODUCTORA ELÈCTRICA S.A. ROE that we can check was 11.54%. This percentage is growing every year, as we just explained, an evolution that follows ROA.

Although we would need to do an exhaustive financial analysis to conclude whether this is a good company to invest in, as this result are greater than the actual interest rate, it can be worth risking our money and investing on it.

Working Capital

Watching the 2 companies results, we can see the working capital. Working capital is the part of the current assets of a company financed with long-term debt (non-current liabilities). It is calculated using the difference between current assets and short-term debt (current liabilities).

[8]

As we can see, on both companies the working capital is positive and high, this is a good sign because it indicates us that the company will have no problems facing its debts at short term. That's is because their short-term assets value is greater than its short-term debt.

2.2. IMPLEMENTATION OBJECTIVES

Companies that use CRM solutions generate more sales opportunities and a better management efficiency with updated real-time budgets and optimized sales processes. Similarly, companies that use CRM can do better segmentation, and have the information for a higher level of customer service and after-sales service. And HIDRO will take advantage of all that. Therefore, the main objectives of this project are:

- Endow to HIDRO a project of real digital transformation, converting one of his most usual tasks in a simple process, structured, mobile and multiplatform.
- Achieve an advantage for HIDRO, thanks to the solution offered. Once the solution is installed, HIDRO will be able to manage their cases faster than before and in a much easier way.
- Improve client's efficiency, which Will lead HIDRO to a benefit that can be translated in more income over the years
- Obtain productivity using the solution, with a minimum interaction from the salespeople because they will access all the necessary data on the CRM.
- Maximize the use of Outlook and mobile applications. As CRM 365 is a Microsoft Software, this can be connected with other software that HIDRO has which are Microsoft software as well, such as Outlook.
- Endow to the workers some surroundings of work in mobility adapted to his needs. They will have the possibility of using CRM 365 in a smartphone or tablet.
- Endow to HidroDis and to HidroCom a unified flow of incidences management. Using CRM, they will have all the cases together, because before they just managed each case with a paper, separately.

- Have a solution based in the cloud and the payment by use, so that:
 - It won't be necessary to use the local infrastructure and of the cost and maintenance that supposes for having a local server.
 - It will have an infrastructure with guaranteed performance and complete scalability.
 - It will have the last technological tools created by Microsoft to give solutions to the needs of HIDRO, as Microsoft Power Apps or Microsoft Flow, included in the license of Dynamics 365 SALES.
 - It will have a system fully protected against external threats, hackers, and other types of cyber-attacks.
 - The data will be always safe thanks to a backup and recovery system totally guaranteed and created by Microsoft.

2.3. IMPLEMENTING D365

Our company has decided to start this project because it's challenging and it will give us a lot of knowledge.

We already know that normally, any new project that is very different from the others that we have developed in the past, can be challenging so we will focus on knowledge, which will be our main interest.

The knowledge that we will gain from this implementation, can be used in many other projects. Once we finish HIDRO's project, that will give us a lot of knowledge of cases, how to develop, divide and develop them. This will be useful because there are many other companies that use cases in their customer service department.

As we mentioned, HIDRO is a company that works by cases, that are created by the customer service department and by other departments. These cases will go through several employees and will have a huge impact on the day to day company activities.

We present the client a solution that goes beyond setting up a product, we present them a new way of working, a new motivation that will help them fulfil their work obligations, and at the same time, we offer them the possibility of being able to change their work for the better business and customer service management.

This often involves a change in business strategy, whose main objective is to provide greater effectiveness and quality in the way it works for its end customer, and being able to contribute this utility and these benefits is, in large part, one of the motivations that lead us to enjoy and get involved in each project as if it were our own company.

As we will explain later on (see [chapter 5](#)) one of the phases on the work methodology of any project that is developed in our company, either of the department of CE (CRM), like the one of any other department of the company, is the analysis phase.

The analysis phase is the main key of the project that, in addition to being the starting point at the start of any functional work, is also essential because, at the time of setting up the solution, this one must be perfectly suitable and fit perfectly with the client requirements and needs that he showed.

In this case, the need to manage the customer service department is initially raised. This department is made up not only of the administration people who are personally attending to the requirements of the clients, but also those people, electric workers, who manage the work orders.

The work order is basically a document that collects the data of the activities that are carried out by the personnel who carry out the maintenance. This type of document is different for each company depending on its activity, labour and equipment that it possesses but in general they all have common data.

In HIDRO's scenario, a work order will be the "cases" that we will be talking on these pages. These cases will be related to electric meters. Anything related to these devices will be a case, such as:

- Opening a new electric supply for a client.
- Closing a supply when a client stops paying
- Increase power supply.
- Decrease power supply.

This all will depend on customer actions and needs.

That is, from the first moment we identify which module will be involved in the solution to be defined by our company.

If we analyse the product offered by CE, and take into consideration the licenses acquired by HIDRO, the initial needs arising from HIDRO are to configure and adapt the Customer Services module in its entirety; the management of cases, queues, activities and SLAs.

All of this obviously in addition to the rest of the main functionalities that any module of Customer Engagement incorporates, the area of Clients, Contacts and Leads.

At the time the Microsoft Solution was introduced, management was focused on maximizing the potential of the tool in terms of process management for case management.

Microsoft product covers the management of the customer service area and the configuration of a process fully adapted to the way of working and managing the cases in each case.

Transmitting this idea, HIDRO saw in Dynamics 365 the possibility of managing its customer service cases through the fully customized configuration of this standard process that CRM 365 incorporates.

The management of cases from Dynamics 365 is based on a series of phases to follow until reaching the last phase and the closure of the same case. At the same time, each phase has a set of necessary fields to be filled and indispensable to be able to go to the next phase.

On figure 1 we can see an example of phases inside a case.

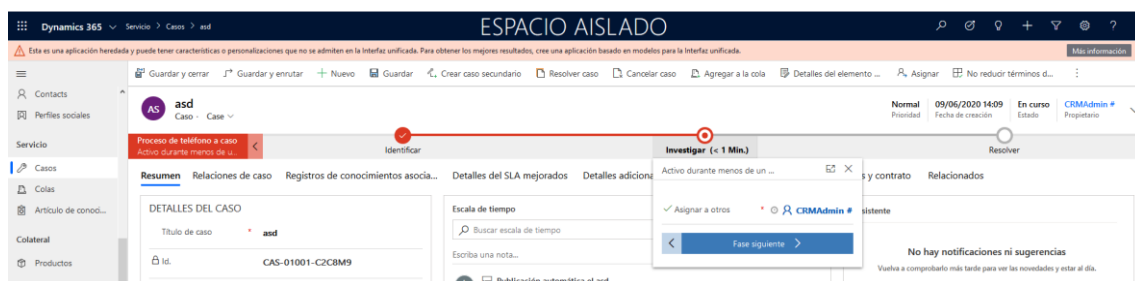


Figure 1. CRM Phases. Source: CRM Dynamics 365

The determination of these phases, as well as the necessary requirements in each of them was the key in the analysis and in the requirements taking once the Project has already started.

Another element that has been taken into consideration and that at first was a small obstacle, was the need to differentiate two independent business units within the same company.

This was necessary because HIDRO is composed of two companies simultaneously independent one from the other.

Before we talked about the financial structure of HIDRO, now we will divide the company by its distribution and its administration, which as we know, are divided in two companies.

Details of how will we treat these 2 companies will be explained later, when we analyse the project.

According to the license acquired by Hidro, this multi-company management was not feasible, as it did not include the configuration of two CRMs dependent on a main unit.

So, right from the start and putting this issue on the table, it was decided to work on creating two business units that would depend on one main business unit, which would be HIDRO.

So, in the end we would only have a CRM but both companies in terms of data and application configuration, they would be distinguished between HidroCom and HidroDis. These business units will be key to setting up all the processes at the same time; also understanding how they both work and interact will be essential when it comes to managing the customer service department.

Why is this necessary?

CE by default does not support business which have several companies, and the client needs to manage two different companies at the same time. On an ERP this is easier because by default it supports business with several companies.

One solution could be having these 2 businesses together, and then differentiating them by views. For example, showing the clients of HidroDis in a view and showing the clients of HidroCom in another view. In this solution the records will be differentiated, but any user will be able to access to all the data from the 2 companies.

That is why we decided to create 2 different business units for every company. In this way, there will also be different view for each type of client, but a HidroDis business unit user, will not be able to see HidroCom clients, because they will be at HidroCom business unit. And this is what the client needed, have the data from the 2 companies separated in order to have more security and control over its data.

Along with these two business units, HidroGas is also considered. Although it is true that when it comes to technical data, nowadays they do not have large amounts of data, its management will be considered as well. We will be joining HidroGas and HidroCom in the same business unit.

In addition, and although in the first phase of the project, the management of this is not included, we will be adding two more additional functionalities.

Inside the HIDRO's management two other areas will be anticipated and considered, this will be Electric Vehicle and self-supply clients.

On figure 2 we can clearly see the structure that HIDRO will have in CRM.

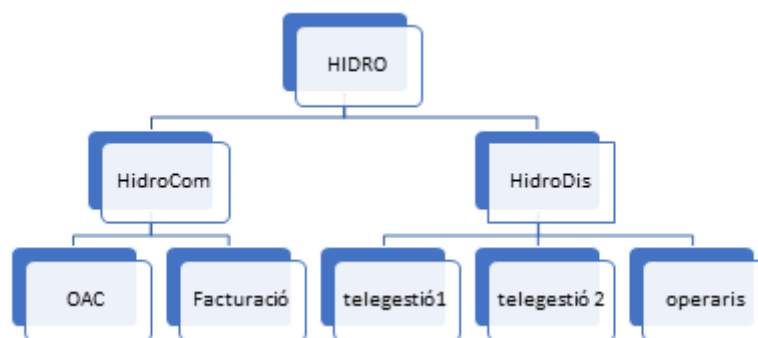


Figure 2. HIDRO's structure. Source: HIDRO's structure developed by our company

Therefore, having like premise this hierarchy and business situation, we collected the maximum amount information as it was possible when it comes to methodology of work on the part of Hidro, how they worked so far, what their current situation was, and what their requirements and needs were.

So far, the customer service department works entirely manually, where the most direct and used means of communication between the different roles and teams of the two companies in order to manage incidents and other actions is the telephone and sometimes email.

However, talking about electric workers, they fill in all the information they must collect through a work order printed on paper, where they will have to manually attach all the information that is necessary for the work order.

While it is true that the entire case management flow until now was completely manual without any automation, they had a very clear distinction between every process when it comes to case management.

However, this definition of Hidro cases, is the one that later has caused us a certain degree of confusion and complexities. From the outset it provided a whole set of diagrams and documents that defined each and every one of the processes as well as the fields that were needed in each of the phases, but this documentation has been changing throughout the project (as we will be commenting afterwards), due, most of the time, to the lack of detail or knowledge on the part of the Hidro key users.

Taking all of this in consideration the project presented will focus the following areas:

- HidroCom: Management of the commercial cycle of the company and in the idea of marketing for customers, possible customers and projects (Leads) of HIDRO, guaranteeing that the users have availability of the information in a simple and effective way, in On-line and Off-Line as well.
- HidroDis: Management of customers and contacts and management of cases of customer service (incidences, repairs, frauds...) connected with HidroDis company for those customers shared. The electric worker will have an app on their phone for the resolution of the work orders coming created by cases.

As we commented before we will also include HidroGas, but this one doesn't have that much importance, and will be inside HidroCom.

Optionally, there will be the possibility of integrate a record of all information about the customers of HidroDis company from his current solution to give to the salespeople the information of the agreements and consumptions of the customers and can use this information for segmentation and Marketing management.

3. CRM EXPLANATION

3.1. CRM

CRM is a client management software that allows you a customized management and a communication depending on the client's needs. It is a customer relationship management solution, typically aimed at managing three basic areas: business management, marketing, and after-sales or customer service.

A CRM can be any form of client management system. For example, an excel could be a basic CRM system, having some basic fields such as contact, web page, most liked product per each client, etc.

The use of a CRM is part of a customer-oriented strategy in which all actions have the goal of improving customer and potential customer service and relationships. The CRM tool and customer orientation provide demonstrable results, both for having a structured business management that enhances sales productivity and for offering a deep knowledge of the customer that allows for more effective marketing campaigns. [11]

With its usage, you can keep in touch with our customers, warning them if a product he normally buys is in stock, if something related to our company or to any product that he's interested changes. And we can also set that every 15 days, CRM automatically sends an email to remember a client and event in our company that might be interesting for him.

You can also segment clients, making lists, so depending on the client you will send a different email.

It is important to keep track of customers and prospects (prospects are potential clients that can be clients in the near future). With CRM you can do that. For example, if you have a restaurant, you want to show a very special customer important for your business and you care for him, when he has successfully booked a table, and because it's him, he will have the appetizer that he likes. In that way, this client will be satisfied with its care.

Allows you to share and maximize the knowledge of a given customer and thus understand their needs and anticipate them. By definition, the CRM collects all the information of the commercial managements maintaining a detailed history.

These customer service functions of a CRM also enhance customer loyalty and satisfaction, which has a very positive impact in terms of recurring and cross-selling.

As said before, a company also needs to pay attention to its prospects, and all his data. You can have this stored in your CRM, so you can for instance check if at any time a client had accepted a budget.

Another important feature in CRM is showing statistics, about everything that can be useful for the sales department of any company.

3.2. CRM history

3.2.1. 1980-1990 The birth of the first CRM and development of databases for companies

They were complicated, and their implementation required time and money (nowadays they are better but they it is still tricky to learn how to manage them) [3]

- 1986: Creation of contact managers.
- 1989: Jon Ferrara creates Goldmine and develops the first SFA (Sales Force Automation), aimed at SMEs. These applications included Contact Management (contacts), Opportunity Management (sales opportunities) and Revenue Forecasting (billing forecasts).

3.2.2. 1990-2000 Takeoff of the CRM

They are implanted in big companies as integrated solutions. The term CRM, coined by Tom Siebel, is imposed, agglutinating all the above concepts: A software for the management of customer relations, sales, marketing and support.

It is in this decade that the big ERPs are completed with a CRM solution.

- 1993: Siebel is born, world leader of CRM of the moment. It then offered e-business products.
- 1995: Call Centres, data stored and difficult to access.
- 1996-98: ERP software (Enterprise Resource Planning), with Front Office processes (customer contact). At this time in the history of the CRM it was still considered incomplete.
- 1999: Marc Benioff founded Salesforce, 100% Cloud software (e-CRM). Rent comes to the world of enterprise software, based on SaaS: Software as a Service, predictable cost and on demand.

3.2.3. 2000-2010 Decade of the 'Bubble.com'

Smaller, cheaper, and Windows-based CRMs proliferate; but without strategy.

- 2001: Sage CRM arises from the merge of several companies of this software for small and medium enterprises.
- 2002: Microsoft becomes the main actor of the CRM + ERP. In addition, it is estimated that 65% of CRM implementations are unsuccessful, so their effectiveness is doubted, and users are not satisfied.
- End of decade: Salesforce is positioned as a world leader with its Cloud + SFA + Simple model.

CRM is beginning to be understood at this time as a customer approach strategy, rather than as a software itself. Road to Relational Marketing, placing the customer in the spotlight, with personalized communication that makes him feel unique: long-term relationships are created, loyalty begins to appear.

3.2.4. 2010-2015 The Cloud is imposed on the local CRM.

It's not necessary anymore to install heavy CRM software on computers, because CRM platform can be accessed in the cloud.

This is potentially a business initiative.

Throughout this decade in which we live, CRMs are being made easier to use at user level and accessible to people without any computer skills. The small companies are CRM's principal target.

The cloud is imposed on the local CRM, what does this imply? It is not necessary to install heavy CRM software on computers, but you can access the CRM platform in the cloud.

- 2011: Business communication software in the cloud. Companies pay for each subscription.
- 2013: Universal accessibility and multiplatform system, that is, access from mobile devices. The concept of Social CRM arises through social networks: attracting customers thanks to Twitter, Facebook, YouTube ... Companies can monitor that information.
- 2015: SumaCRM is born, whose claim is precisely: 'CRM for small businesses'.

3.3. CRM 365 for Sales

CRM 365 for Sales is Microsoft's Software for Customer Relationship Management. Microsoft created this tool after creating Dynamics 365, which is Microsoft's ERP.

ERP stands for Enterprise Resource Planning. An ERP is responsible for many internal operations of a company, from production to distribution and even human resources. It contains any information that is valuable for the company, including accountability, etc.

3.3.1. CRM 365 for Sales Description

Dynamics 365 Sales enables salespeople to build strong relationships with their customers, take actions based on insights, and close sales faster. [2]

Dynamics 365 Sales keeps track of your accounts and contacts, nurtures sales from lead to order, and creates sales. It also lets to anyone create marketing lists and campaigns, and even follow service cases associated with specific accounts or opportunities.

It can be directly connected to Dynamics 365 F&Ops. That means that any record created in Dynamics 365 F&Ops will also appear in CRM.

The default synchronization between Dynamics 365 and Dynamics 365 for Sales (CRM) is detailed in Prospect to Cash (CAPITOL X).

3.3.2. Availability

Dynamics 365 Sales offers great benefits, whether you're using a desktop, phone, or tablet. Here are the different apps Dynamics 365 Sales is available in:

- The Sales Hub app is built on the Unified Interface framework. The Unified Interface framework uses responsive web design principles to provide an optimal viewing and interaction experience for any screen size, device, or orientation. The Sales Hub app is optimized to work on mobile devices as well as desktops.
- The Sales app is designed for the legacy web client and is the full-featured, desktop-optimized web client app for sales scenarios.
- The Sales Professional app is similar to the Sales Hub app, but the entities included in the Sales Professional app are a subset of the entities included in the Sales Enterprise.

3.3.3. Benefits for salespeople

- Follow guided business processes, so you know which steps to take next to close deals faster. You can tailor these business processes for your organization's needs.
- Manage customers and deals wherever you are, on any device (phone, tablet, PC, or Mac).
- Get productive faster by using familiar tools. Dynamics 365 Sales is tightly integrated with Office 365 apps, which makes it easier to get going more quickly:
- Use SharePoint to store and view documents like presentations or notes in the context of a record, such as an opportunity, so anyone working on the opportunity can view them.
- Open sales data in Excel, make changes, and save the changes back to Dynamics 365 Sales—all without switching between applications.
- Get actionable insights and suggestions based on how you work. For example, if you have an opportunity closing next week, the Relationship Assistant will send you a reminder to connect with your customer.
- Find all activities (appointments, phone calls, and so on) related to a customer or opportunity in one central place, so you have the context you need to do your job.

3.3.4. Benefits for sales managers

- Accelerate your team's performance by using real-time analytics based on historical data and predictive information.
- Monitor results, and provide feedback and coaching, in real time.
- Use immersive Excel and prebuilt templates to do quick analysis without leaving Dynamics 365 Sales.

3.3.5. Advantages being a Microsoft Software

The fact that this is a Microsoft software provides more security to the owner. Microsoft is one of the biggest companies in the world, and as a big company, it has many advantages:

- More financial stability than a small company.
- Thousands of employees.
- Modern management techniques
- Access to economies of scale and scope economies (lower costs).
- Availability of large financial resources.
- Leadership in technology and innovation.
- Highly qualified human resources.

However, we must consider that CRM 365 is somewhat more expensive than other CRMs that are on the market. But usually, the cheaper provides a worse solution. There are a lot of cheaper CRM than CE, but they do not have a connected platform as Microsoft does, which helps keep CRM, ERP and other applications connected. Most of CRMs have individual installations and are not connected by default to any ERP.

Also, a lot of companies use outlook as their tool to send and receive emails. CRM 365 is the only CRM that can be attached to outlook and keep a track of your clients from there.

3.3.6. Customer engagement

We need to clarify that even though the main used CRM module is Sales, there are another module.

Some features of CRM 365 for Sales:

As we talked before, CRM normally uses lists to classify clients. In CRM 365 for Sales, there's a feature called Marketing Lists, which you can use for sending emails to a certain group of clients.

Previously we will have defined several fields to differentiate one client from another, so we can make a marketing list that fits more to one concrete client.

Another feature in 365 for Sales, is showing special statistics in the Dashboard as we can see in figure 3 you can add several entities to see many information mixed.

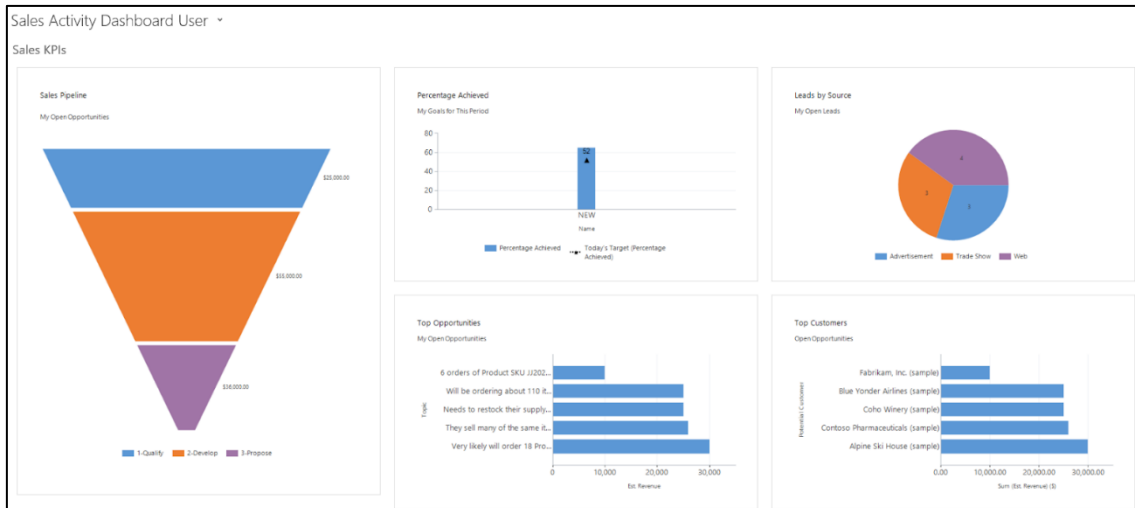


Figure 3. CRM 365 Sales - Dashboard

We've described Sales because is the module that we will mainly use in HIDRO, another module that we will use is Customer Service, with the use of cases. This will be detailed talking about the project (see [chapter 5.2.7](#)).

All the modules of Customer Engagement: -Sales: opportunities, workflows, accounts, contact, leads.

-Customer Service: mainly cases.

-Field Service: Services management. Resources distribution, workorders, workorders dashboard.

-Marketing Insights: usage of sending automatic emails mostly.

-Portals: webpage to give access to several clients to some CRM functionalities and data.

4. DATA INTEGRATION

4.1. Why do we need data integration?

Nowadays, companies often have many departments, such as:

- Finance
- Sales
- Customer Service
- Risk etc.

Let's imagine that each department has his own database. Actually, let's be more clear, imagine that each department uses his own Software, different than the other departments (which is accurate). If the Sales department, uses for instance CE, and the Finance department uses D365 F&Ops, how can we obtain data from the two software at the same time?

As we know, F&OPS is Microsoft's ERP on the cloud, and there we can see all the data. But if someone is just using CRM and wants to see some data that it is only on the ERP, this data must be integrated into CRM.

There are many ways to accomplish this:

- Having all this data in the same format, such as excel sheets. We know that's not a good option because [4]:
 - Crucial data is invisible
 - Difficult analysis
 - Data distortion
 - Historical data loss
 - Difficulty in sharing
 - Bad reputation among data analysts
- Connecting databases. Connecting databases doesn't sound like the worst alternative. But the main problem of this alternative would be data inconsistency and a huge complexity. Having many databases connected between them can be very complex and that can consume a lot of resources, which won't do any good to a database server.
- Data integration. Here is where we can find a much easier way that is accessible for everyone that needs it.

4.2. What is exactly data integration?

Data integration consists in getting data from several sources (for example excel sheets, databases, note texts...), and integrate all of them in one destiny.

Using data integration, we will accomplish:

- Reduce data complexity
- Data integrity: having all our data together without any inconsistencies.

Once it's clarified why we need Data Integration, it's necessary to know that there are several types of integrations, normally they all come from different companies:

- SAP Data Services
- Oracle Data integration
- Sql Server Integration Services
- And many more

On this project we will use Sql Server Integration Services. Our client has installed many Microsoft software, and using SSIS allows integration between many Microsoft products, which can be an advantage for HIDRO.

4.3. KINGSWAY +SSIS

KingswaySoft is a leading integration solutions provider offering software solutions that make data integration affordable and seamless. Thousands of business customers in 90 countries and regions rely on their solutions to integrate data with various application systems to drive business efficiency and make the most of their information assets.

To use Kingsway software from Kingswayoft, we will have some previous requirements to install:

- Visual Studio. Which is Microsoft's IDE. The acronym IDE stands for 'Integrated Development Environment'. These are programs that facilitate the use of programming languages, going beyond the source code editors reviewed in a previous post. In general, they include the text editor, but they add a compiler and a debugger, among other features. In fact, nowadays the line that separates IDEs from code editors can be very thin, due to the functionalities that are added to the latter. For example, Brackets, which appears in all code editor lists and is presented as such in its own web, has enough functionalities to be considered an IDE and, in fact, it appears in their lists as well.
- Anyway, in principle the IDE is a more complex and powerful environment than code editors and, moreover, it is usually more focused on a specific work in certain contexts or languages. Therefore, it is again a matter of personal preferences and type of work being done. Generally, a code editor is for work with a wider range of possibilities, while the IDE is more focused on a particular language.
- Sql Server Data Tools. Sql Server Data tools, also known as SSDT, is a modern development tool for creating SQL Server relational databases, Azure SQL databases, Analysis Services (AS) data models, Integration Services (which is the one that we will be using), packages and Reporting Services (RS) reports. With SSDT, you can design and deploy any type of SQL Server content as easily as you would develop an application in Visual Studio.
- Sql Server Integration Services.
- Download Kingsway SSIS productivity pack.

Once we have everything installed:

The first step that we will do in our project is Open Visual Studio. Once We're there, we will create a new SSIS package:

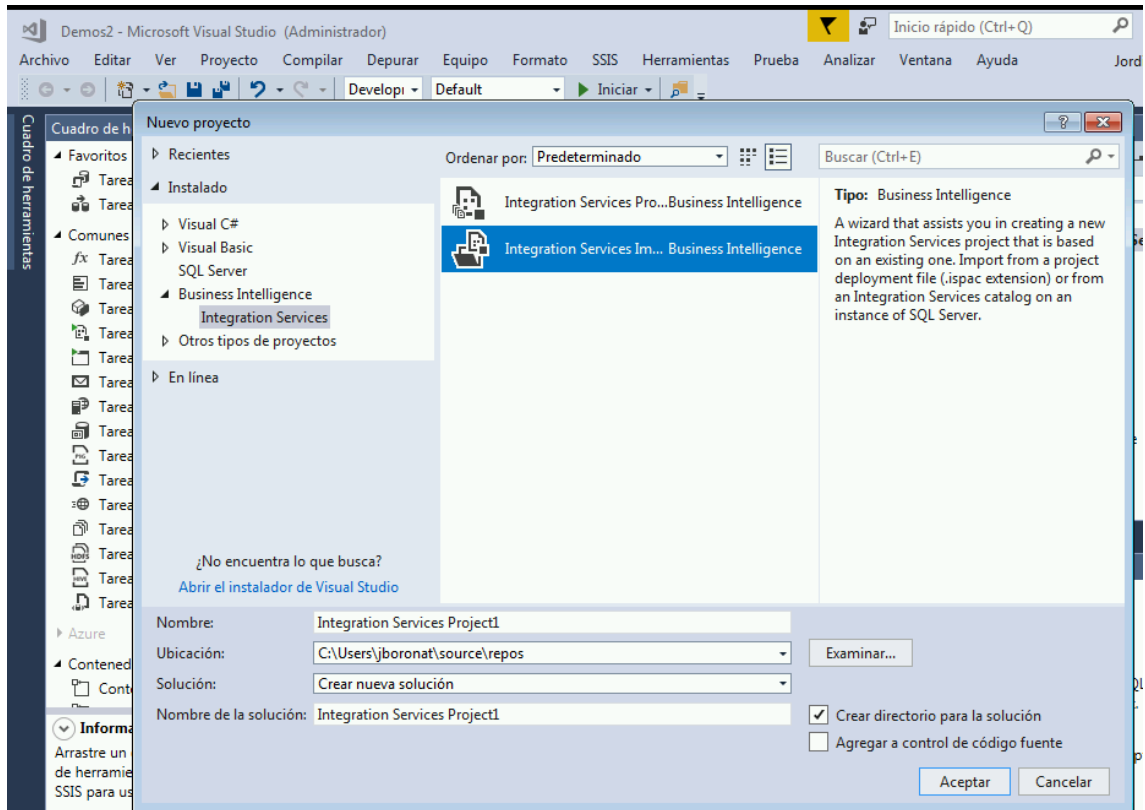


Figure 4. Integration - Creating a project. Source: Visual Studio Software

Then we will add a “DataFlow” and we will name it “Clientes” for the CRM entity Clients

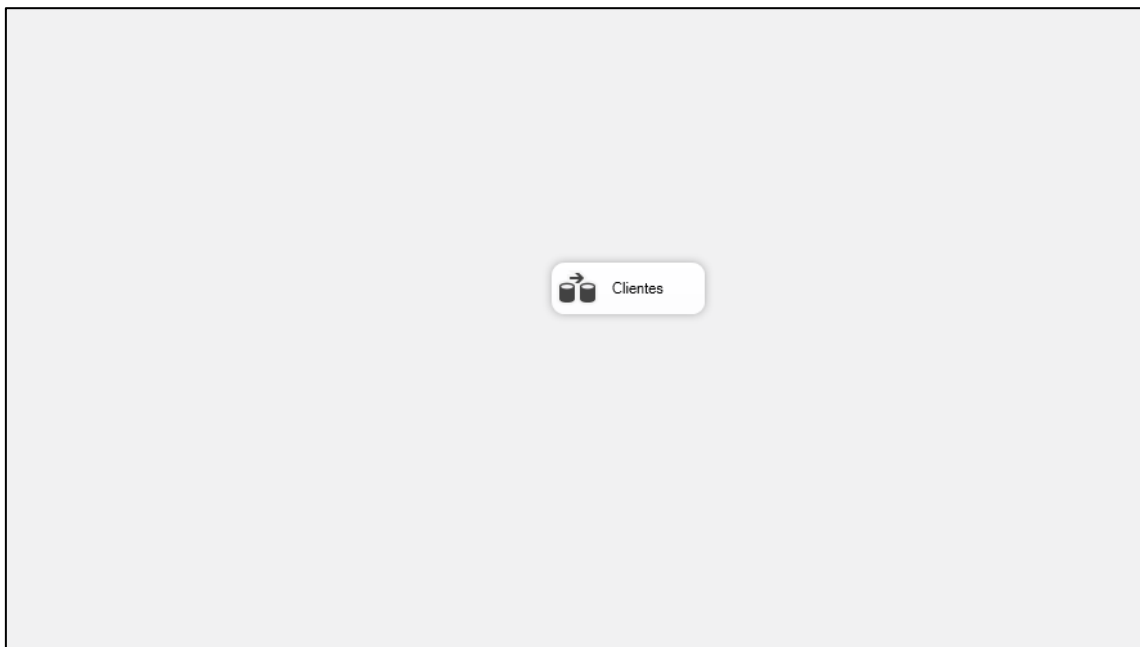


Figure 5. Integration – Dataflow. Source: Visual Studio Software

Each dataflow will be based on CRM entity. And then inside the dataflow, we will select the source of our data. Which, in this case is an SQL server database.

As we can see on the following picture, we will transfer data (clients) from SQL server of HIDRO to his new CRM. Between the source and the destiny, we have a “Columna derivada” that will help us to make any necessary transformation or add a new column if we need to.

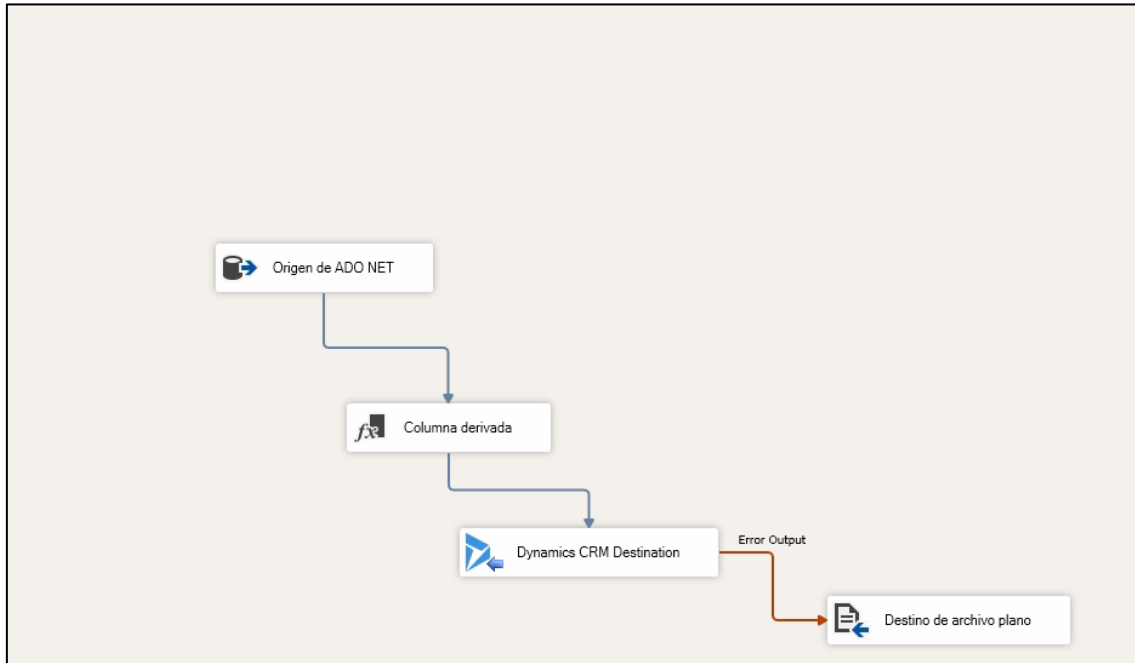


Figure 6.Integration - Dataflow Structure. Source: Visual Studio Software

Once this data flow is finished, every time we manually execute it, and if we don't get any errors, the data will be displayed on CRM.

Then we just need to do all the dataflows for all the entities that HIDRO wants to import to CRM and that will be it.

When we ended all our dataflows, we have what we call “interface” which has all the necessary entities.

The only problem is that the interface must be executed manually, and we can't have a person that every 10 minutes is executing the interface. This is necessary because HIDRO wants to have the date simultaneously in CRM and in F&OPS (the data that is in the SQL server).

What we will do is integrate the project in SSIS and keep it running automatically.

4.4. Prospect to cash – Another integration way

Another integration alternative is Prospect to Cash, which has standard templates to integrate several entities from Dynamics Finance and Operations to Dynamics 365 for Sales.

The Prospect to cash templates available with the data integration feature allows dataflow from accounts, contacts, products, sales budgets, sales orders and sales invoices.

As dataflows, you can perform sales and marketing activities in Sales and control order fulfilment through inventory management in Supply Chain Management (Dynamics 365 feature).

In figure 7, you can see several entities in Dynamics 365 Sales and in Dynamics 365 F&Ops. The arrows in the middle of the picture, reveal the dataflows.

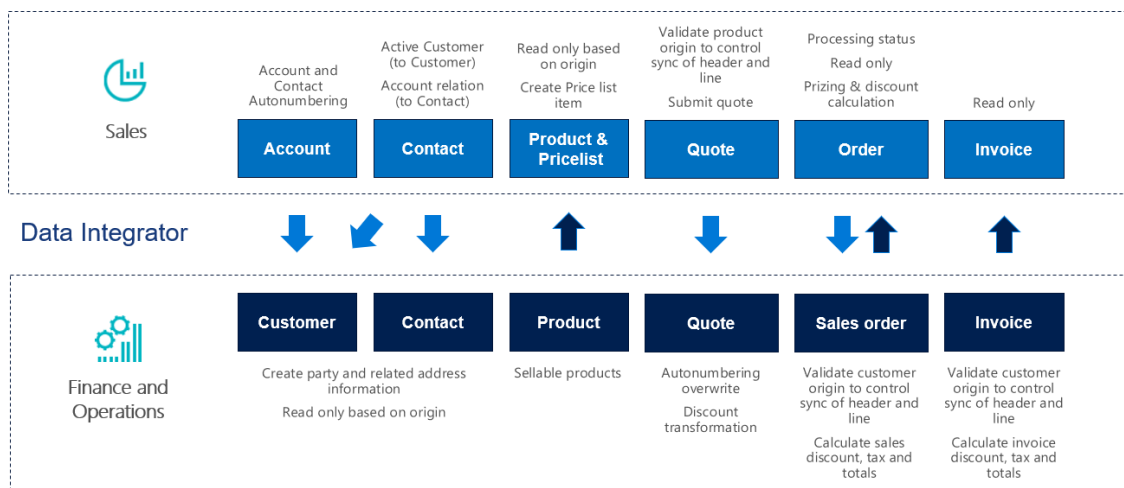


Figure 7. Prospect to Cash structure. Source: <https://docs.microsoft.com/es-es/dynamics365/supply-chain/sales-marketing/products-template-mapping-direct>

For example, in the first one, you can see that Accounts and contacts, which are basically clients, will be created in CRM, which should be like that, because CRM is used by employees who normally work face to face with clients. And after clients are created in CRM, that records will be imported to the ERP F&Ops, so any employee who is not using CRM but the ERP, will see all the clients as well.

On the other hand, you can see that products are created in F&Ops and will be afterwards imported in CRM, and it should be like that because CRM is not actually designed for this purpose. On F&Ops you can create families of products, parent-products, several characteristics for each product, etc.

Prospect to cash or P2Cash, it's the default way to synchronize data between CRM and Microsoft's ERP, but there are other ways to do it, as we mentioned before.

4.5. Data Synchronization

Once our Kingsway project is completed, we need to implement it in order to send it to an SSIS. We would do it like this doing right click on our project, and "Implement it":

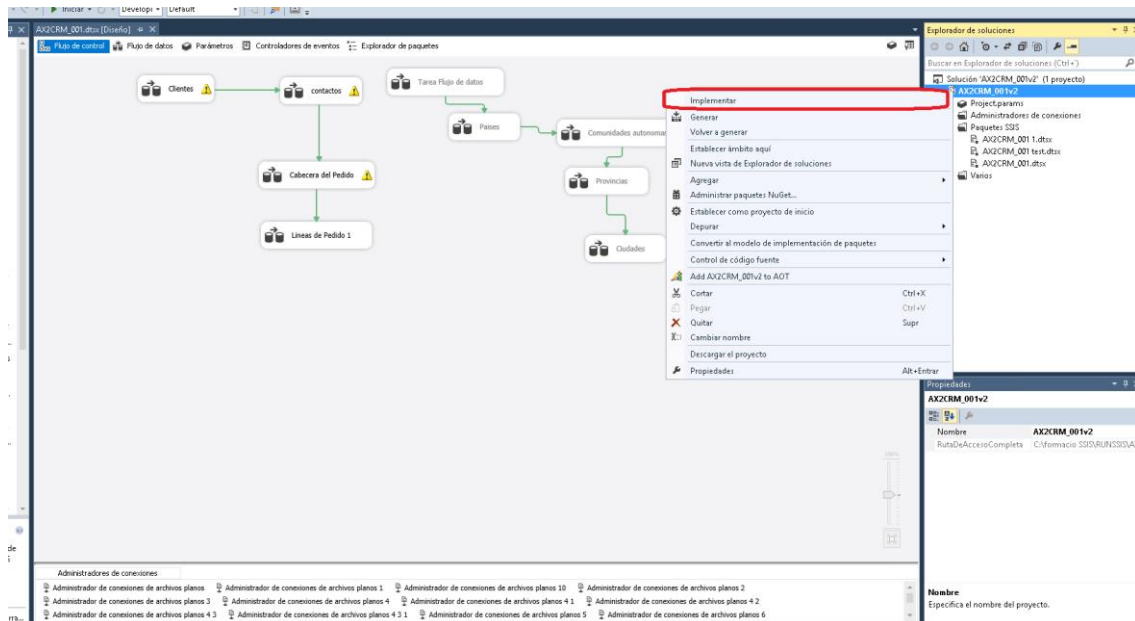


Figure 8. Implementing an Interface. Source: Visual Studio Software

Once we implement our project, it will appear on SSIS Catalogue.

We need to have installed SSMS on a server from which we can access the data that we need.

We open SSMS and locate our SSIS project inside the SSIS Catalogue:

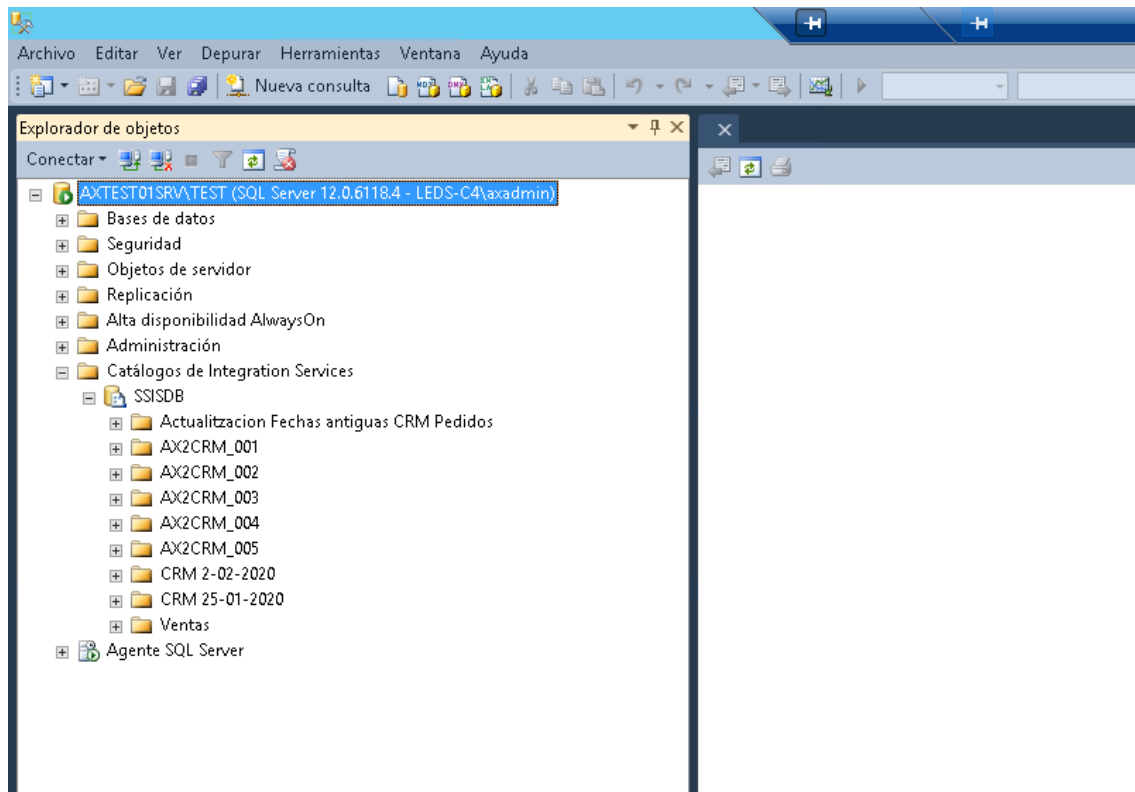


Figure 9. Opening Database. Source: Sql Server Management Studio Software

After that, we will go to Agent SQL Server, which will help us to make an SQL job that basically, will run our project when we want.

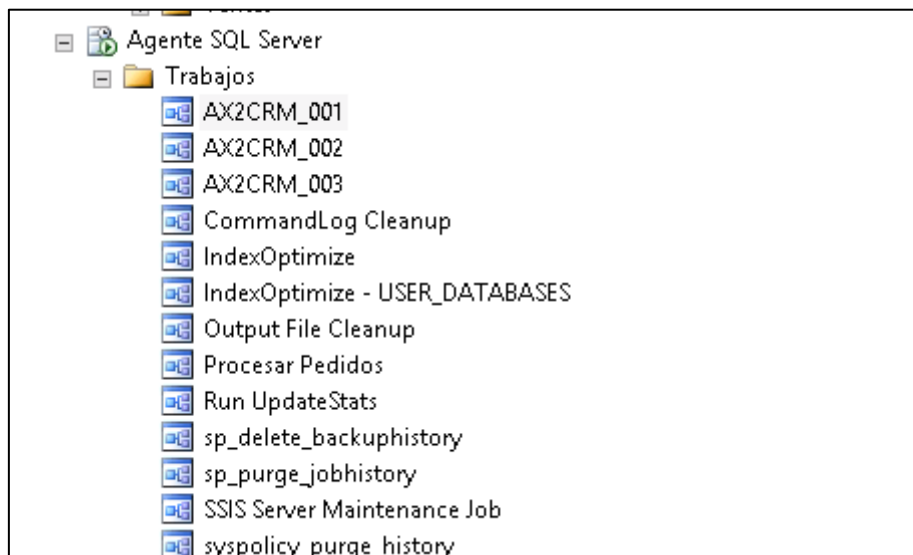


Figure 10. Creating SQL Job. Source: Sql Server Management Studio Software

Inside each project, we set the timer.

For HIDRO, we set a 20 min timer in the Agent, so our package will be executed every 20 minutes.

This is so useful and also necessary because in this way, the client will have updated the same data in his Database SQL, ERP and in their CRM at the same time.

5. INTEGRATION PROPOSAL

5.1. Needs and development

The development that will take place from our company will be the result of HIDRO's approach of the solution. One important part of that development will be differentiating if a client is HidroDis, HidroCom or HidroGas. That difference will be determined by its supplies and contracts.

Taking that into consideration, it means that if client's supply closes (the client stops receiving the service), if that this was last supply for example of IGSEDIS that this client had, this client will no longer be IGSEDIS.

For example: if a client has 4 supplies, 3 are supplies from HidroCom (IGSECOM) and one is from HidroDis (IGSEDIS), then the client is IGSEDIS and IGSECOM at the same time. Then if the client stops receiving the last one, it will no longer be an IGSEDIS client because it hasn't got any supplies from HidroDis. Then again, if a new supply from HidroDis suddenly appears for this client, this client will be back IGSEDIS and will also continue being IGSECOM. HidroGas clients and supplies will be called IGSEGAS.

Our company's development principal objective is meet HIDRO's needs.

The development desires will work directly in supplies' entity, and it will match them with account's entity (also known as client).

Our company will make a custom Dynamics 365 plugin. The main objective of this plugin will be automatically removing a client from HidroDis (if it has no more IGSEDIS supplies), or from HidroCom (if it has no more IGSECOM supplies). But is will also add a client to HidroDis, for example, if this client has a new IGSEDIS supply.

This will be done, using several booleans (an attribute that indicates us two values: True or False, or can be expressed in 0 or 1) CRM fields on the account entity. These Boolean fields will be converted into True/False automatically by the custom plugin.

A client will not be completely deactivated until the last of its supplies it's removed.

5.2. CRM Team Description

On the CRM implementation team, we try to adapt CRM 365 to our clients and make them adapt to our software ace well.

The CRM team are composed by the following Members:

- CRM director
- Consultant_A
- Consultant_B
- Developer_A
- Developer_B (this is my role in the project)

CRM director: the leader and the director of all our projects. He's been in this company for about 20 years and has great experience dealing with clients. His main task is searching for new clients and when he finds one, he speaks to all the team about the new client, his needs and then we start to discuss how can we adapt our CRM to their business.

Consultant_A: CRM Sales Consultant. Once our project leader explains how a client manage his business, Consultant_A thinks about how to adapt our CRM to this business. After she finishes analysing and find a possible solution for the client, he speaks with Developer_A and Developer_B: to let them know what the CRM is not doing right now, and what it needs to do, and after that, they do as many modifications as needed.

Consultant_B: CRM Marketing Consultant. She has the same duties as Consultant_A but she focuses on the CRM Marketing field.

Developer_A: he is a CRM architect. Once he receives information about the client from our two consultants, he designs a possible solution for them, and think about how many changes we need to do to the standard CRM to make find the needs of our client.

It is important for Developer_A and Developer_B to estimate how many hours of coding and designing the solution they need. This must be done before they start to work on the project, because the project leader must know an estimate budget and therefore send it to the client.

5.3. CRM Team organisation

Every project within the company, regardless of the department involved and the people involved, has the same procedural and management structure, although it is true that all the phases that we will analyse must be considered and adapted at any moment to the particular and subjective characteristics of the specific case, but without losing sight of the methodology implemented. Because without a well-defined structure from a good start, the project loses the necessary focus and gets out of control, then, a danger appears, a danger that can influence in the compliance with deadlines and tasks that make up the project.

Therefore, every project is made up of a series of specific phases:

- Pre-sale
 - Reach the potential customer
 - Marketing company collaboration
 - Our company as a Microsoft Partner
 - Direct contact with the client
 - Demo
 - Presentation of our company
 - Presentation of CRM
 - Presentation of the possible solution
 - Generation of the need
 - First contact with the client
 - Offer
 - Scope.
 - Economic offer
 - Review / Acceptance of the offer
 - Signing of the Contract.
 - Detail scope of the Project
- Project development
 - Analysis
 - Session with the client and details of the requirements adjusted to the scope
 - Out-of-reach task ratings
 - Entity settings
 - Process configuration and development
 - Interface
 - Tests and validations
 - Training
 - Start
 - Start support.

Although it is true that the methodology implemented is well defined and structured, and as already mentioned, it is the backbone of any project, there are key pieces that make it possible to succeed or to fail. Therefore, there are several elements that must be assessed and considered at the beginning of any project, because without assessing these factors, the project can be distorted. The main key element is the human factor, both by the client in front of us, and our company resources that will be responsible for the development of the project.

Once we have a clear idea about the project to be developed, we allocate those resources that the project needs, those resources that we have and that according to the tasks to be performed are so much more qualified to carry out each and every one of the tasks that will have to be done. That is, in the case of the project we are analysing, it is a project that includes the Customer Services module; then we will have to allocate in this project those resources specialized in this area, and thus will facilitate and speed up the fulfilment of the tasks, so much in quality as in time.

On the part of the company that contracts the services of our company, it is also essential that we know how to let them know that we must be in direct contact with those people who in turn know perfectly what they are, not just the needs that we intend to cover with the solution that we will implement, if not also that they know perfectly each and every one of the areas that pretend to analyse; this is a task that greatly speeds up the analysis phase. In addition, it is also interesting to participate at all times in the so-called KeyUser, as that person or persons (2 at most) who with their direct contact with the rest of co-workers, can make them interested in the implementation of the new tool. This is considered to be a key element, or at least one that has a great influence on the implementation of a new CRM in a company and can make it a success or a failure.

Let's move on to analyse the different phases of the Project.

5.3.1. PRE-SALE

Every project starts with a pre-sale phase, and this can be started from 3 different channels:

- A first channel is based on the collaboration that our company has with an external marketing company, which manages the communication channels in order to capture the entry of new and future customers.
- A second direct channel from a company that contacts our company directly
- A third channel via Microsoft, because our company is Microsoft's partner, so they can reach us to bring new clients to us.

5.3.2. SOURCE

A project can start in several ways:

- External marketing. Our company pays an external marketing company, which tries to attract new customers.
- Our company itself.
- A customer has contacted Microsoft to tell him that he is interested in acquiring CRM and Microsoft informs us why we are contacting the customer.

Afterwards:

The CRM director or someone from our company that is related to our company sales, gets in touch with the customer and we explain the product to them to see if they might be interested.

Specifically, detailed questions are asked to know the approximate needs of the customer, to conclude which CRM extensions would suit him.

- The minimum requirements are detailed
- Meeting of the CRM department. It is specified the people who will take part in this project.

If the consumer is interested in our company's offer, either through the marketing campaign or because it has come for Microsoft, then the whole project is proposed and it is commented that it can be done to make the CRM attractive, with key points, like in HIDRO:

Once you have a first contact with the potential customer, you extract from it some apparent requirements / needs that could be covered with the products that can be offered from our company, not only those that arise from the first communication with the Lead, if not, also provides for those that could easily, and by extension, fit as needs. At this point the protagonist takes on the figure of the salesperson, who will be responsible not only for selling the product that according to the apparent needs fit the Lead, but will also be agile to create a need beyond what is first requested.

After an initial assessment of the potential customer, a Demo will be prepared for him. At this point, it's important to start setting up a solution environment that fits the customer's basic needs, where they can feel identified with the product, and where they see that the solution we present to them can meet their needs; but not only to cover them, but also that with this tool the client is about to acquire something that will give benefit in terms of productivity, revenue or management of the client's sales or customer service team. It is vitally important that the Lead (the client that is possibly going to acquire CRM 365) is identified in the product we present to them, hence at this time begins a basic configuration of an environment with an approximation of what in the future they may be using if they implement the Dynamics 365 solution.

In the case of HIDRO, what was presented at one point, was an environment adapted to case management, where they could see the definition of a process and incident management, how to monitor from the entry of a case in the customer service department, until its full resolution, and that in addition, from all this process, at the end, they could extract a report detailing what, how and who of the management of this case.

But at the time of the Demo it is also important to transfer the trust that the company in front of us can place in our company; thus, our company will be presented, its origin, the sector where it works, and a brief historical summary of the company, as well as the mention of success stories. This transfers a security of entrusting the project to our company.

5.3.3. OFFER

Once the solution has been demonstrated, and if it has succeeded, an economic valuation will be prepared and transferred to the potential customer. Already in this assessment, the project manager will make an estimation depending on the tasks and the scope of the project. A detail will be made of the modules that will make up the project, the tasks to be performed, and the complements that will be needed; the users that will have a license to use the software will be detailed, and the Microsoft licensing modality that is acquired. It can be Enterprise or Professional.

Depending on the client, Professional or Enterprise edition will be chosen [5][9]. HIDRO in this case didn't need Sales Enterprise because they wouldn't need more than 15 custom entities and their main CRM use will be based on cases, which is by default on the Professional license. These differences can be seen at table 7.

		Sales Professional Per User	Sales Enterprise Per User
User Cap		No cap	No cap
Sales Management	Lead and opportunity management	•	•
	Marketing lists, sales campaigns	•	•
	Product, price lists	•	•
	Quotes, orders, invoices	•	•
	Competitors, sales goals, territory management		•
	Product taxonomy, relationships, hierarchies		•
Social Engagement			•
Gamification			•
Voice of Customer			•
Mobile offline sync			•
PowerApps for Dynamics 365			included
Dynamics 365 for Sales embedded intelligence			• (new)
Case management	Create, read, update, delete cases	• (new)	• (new)
Customization in application module	Custom entities*	max 15	unlimited
	Business Process Flows*	max 5	unlimited
	Custom Workflows*	max 15	unlimited
	3 rd Party Application Installs	max 10	unlimited
	Forms per entity	max 2	unlimited
Team Members	Functionality: Accounts, Contacts, Activities, Knowledge, etc.	•	•
	Custom Entities*	•	•
Reporting and analysis	Export to Microsoft Excel, Advanced Analytics with Power BI license	•	•
	Real-time sales reports and dashboards	max 5 report customizations	standard & custom R/D + SRS reports

Table 7. CRM Professional vs CRM Enterprise. Source: <https://www.goomspain.com/dynamics-365-for-sales-professional-microsoft/>

Along with this proposal, an approximate timetable for the duration of the project is also presented.

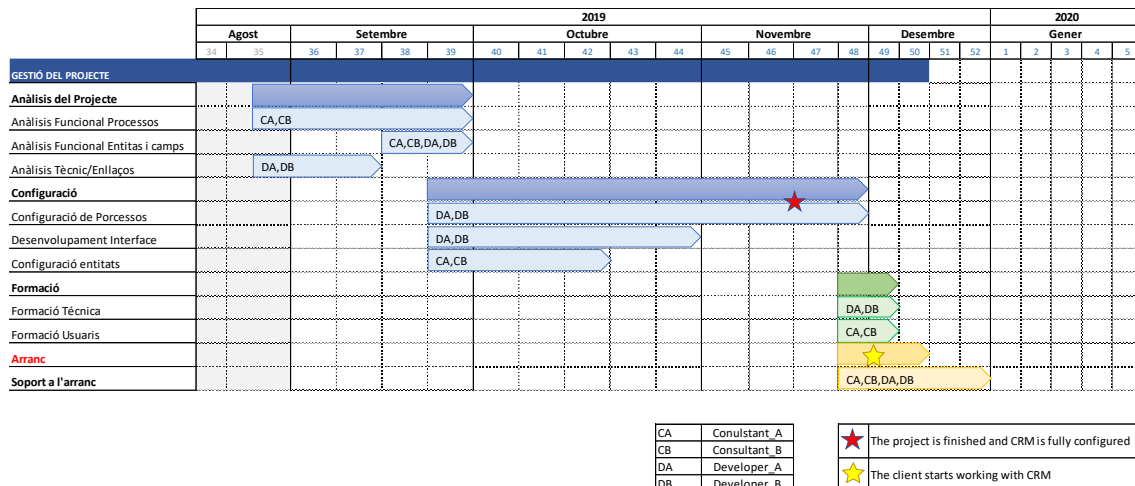


Table 8.Task's calendar. Source: distribution of tasks by our company

The entire team works during each phase of the project (see table 8).

Afterwards we will explain in detail each phase. I would like to mention here, that my work (I'm Developer_B) where mainly focused on developing the cases. That was because our company did not have a client like this before, so it was a good idea giving this task to me because no one in the company knew how to develop cases from scratch with JavaScript and so I could learn from the beginning. And I've used JavaScript during my degree and I knew how it worked so it would be easier for me than for the others.

So we see that in this phase, it is already beginning to outline what will be the scope of the project, and therefore it is already being defined , on the one hand, our company Resources that will be allocated to the project, and on the other hand, have into consideration which resources will be responsible for carrying out the tasks, what will be the extension in days and hours of each of these tasks. However, at this time it is frankly important to consider the workload of each of these resources, as well as their qualification and knowledge in when the module to be configured.

In this way, in the specific case before us, and in the case of the management of the Customer Services module, we will have to allocate to the project, those people in the department specialized in this area, because in addition to having more knowledge, they will have more agility while analysing and configuring each and every one of the defined tasks, because these tasks will be based on their day to day activities.

Following the definition of the offer, the estimated hours in each of the phases of the development of the project will be detailed:

- Analysis
- Configuration of processes and entities
- Interface
- Tests and validations
- Formation
- Supports booting

The CRM manager contacts the customer to place an offer.

The offer will detail the scope of the project.

In each of the tasks, we divide them for CRM members.

The tests and validations that will be done together, for example a consultant and a technician will do them with the client

5.3.3.1. *AFTER THE OFFER*

In the best-case scenario, the offer is accepted, either the first one submitted, or an offer that can be revised and once it is accepted, it is defined from now on what the scope of the project will be.

If the offer is not accepted:

Proposal of another offer and subsequent negotiation with the client will be done.

If the offer is accepted, we will create the scope.

5.3.4. SCOPE -ANALYSIS

We sign a contract and scope.

The scope of the project will be the backbone of its development. Each and every one of the tasks that will be carried out later by the consultants, both technical and functional, must be included in this scope, and this is an important and fundamental idea for the good development of the project, therefore, the accepted offer which is valued in a series of tasks and hours, is what must be adjusted to the activities that consultants must perform.

Therefore, each one of the tasks that will be carried out during the analysis must be within the scope, because if they are not, they must be assessed independently.

The consultant, during the analysis phase will collect the needs and requirements of the client, he must be aware of what are and are not the tasks that are within the scope, in such a way that at the time the client requires some functionality, the consultant must always check the scope, to see whether this functionality it's within the scope or if it is not.

If this functionality was not contemplated on the scope, this doesn't need to be done by heart. But it will have to be transmitted to the client that this functionality that they are requesting must be evaluated separately, independent from the scope.

When this happens, the Director of the project needs to evaluate the new functionality that the client is asking. The director of the projects needs to think how many hours will be needed for that, and how many members of the CRM team will be implied in it. Afterwards he will send a new offer to the client in order to develop this new functionality.

If this new offer is not accepted either because it is not economically adjustable, or because it is not vital, it will not be done.

If the new offer is accepted, we will have a project extension.

Then we will begin to have a basic detail of the project.

In the scope, everything that will be done is explained. For example, if a project has an estimated cost of 20.000 €, we need to detail:

- All the necessary hours that will take place.
- All the necessary licenses that the client will use.
- Which tools will our company need in order to export and import data (explained on chapter 5).

5.3.5. DEMO

Then a demo (demonstration) is given to the client. During in the demo, the CRM manager goes to do the demo, by himself or with one or two CRM consultants.

Once they are with the client, the CRM manager and the consultant (if there is one) will introduce themselves to the client. Sometimes is important that the consultant attends to the demo because he will be the one that will be in touch with the client most of the time.

After the demo, a consultant will be designated as a project manager, and which consultants will be in the project as well.

The CRM programmers, would establish a standard CRM with little customizations, depending on what are the client needs, they will add some configurations or other ones, according to the prerequisites written in the Analysis.

For example, if the client was a Customer Service department, the programmers will set a standard Customer Engagement site. That can't take a lot of time, the CRM programmer simply need to prepare the software for the client to like it, if the team spends 100 hours preparing a software that the client won't finally like, this will be a waste of time and resources.

The idea is teaching the main configuration of the environment; custom fields, flows, nothing too complicated.

It must be something very visual for the customer so they can believe that this is what they need.

But we must remark the importance of having a new customized CRM for each client. Even if it is very basic, we need to do a new one for every demo. Why? Because if we made a demo for a client that sells pet food, and we show a CRM that is designed for a wood factory, it will make no sense to him and he won't acquire CRM because we won't see their needs reflected and solved by CRM 365.

The director of CRM, who also acts as a salesman, makes a first contact with the customer,

Our company is presented. Normally he will explain the company in numbers, something like

"It is a company with 150 employees, 50 years of activity, 4 headquarters, we do international projects"

This shows that the company has good customers and that can transmit confidence to the client and can help convince them to purchase CRM.

Then the CRM solution is presented. Everything it can bring to the client, all the tools it has.

As we've seen before, CRM 365 has many extensions, and some customers may also be interested in another extension like Field Service although this one was not presented in the very beginning.

When the DEMO is made, we need to focus on two main ideas:

- Everything the client is interested
- Everything the client may be interested

The CRM manager looks for what the customer needs and from there, he can even find new needs for the customer. From here, project gets bigger.

5.3.5.1. *AFTER DEMO*

Therefore, once the offer has been accepted, the team that will develop the project will do a meeting.

The project director and the consultants assigned to it are identified. This assignment considers the workload and the experience of the resources (the time that each consultant or programmer has been working with CRM 365 for Sales) according to the module being implemented.

Prior to the start of setting up the environment as such, a meeting is held with the client called Kick Off, with the aim of kicking off the project, presenting not only our company to the company that contracts our services, but also detail the scope of the project, present the solution, define the objectives, identify which employees in our company will be responsible for configuring the solution and explain what will be CRM's team work methodology over the next few weeks in which the project will be developed.

At this time, it is important, in addition to conveying security in terms of knowledge and reliability that the project will go ahead with full confidence, to also convey the necessary bilateral cooperation from both parties. That means that our company will develop the solution for the client, but they also must be available for our doubts, and give any necessary information that our CRM development team could need, such as VPN information, database credentials, etc.

5.3.6. **KICK-OFF**

Kick-off is like a second demo, the project is presented, the working methodology of our company, the calendar, the loading of the data and the incoming configuration of the interface is presented.

At the same time, we will do the analysis divided into chapters. In the case of HIDRO, the main chapters were analysis of cases and workflows.

The methodology of the work is presented, and we say that we will keep in touch until we start the project, which will be on a not so far date.

Once the kick-off is finished, we will start with the project.

5.3.7. PROJECT

In most cases, we will start the project from the analysis stage.

In this first phase, the intervention of the functional consultants will be a key piece, the ones in charge of collecting as much information as necessary in order to be able to detail, at best, each and every one of the requirements, in order to be able to propose a solution.

Nevertheless, as mentioned at the beginning, these requirements must be detailed in the scope of the project, otherwise the client will be told that they are not covered and that it is up to them whether they want to or not. that are included, with the corresponding economic valuation and annexed to the project like an extension of the same.

There will be as many analysis sessions as there were contemplated within the scope of the project. Due to this, it is important to convey to the client the importance of having previously worked on each of the points that will be treated in these sessions, in order to be as accurate as possible and not fall into points that are unknown and of course, not to lose any time.

In the case we are analysing, HIDRO has been providing us with diagrams detailing the flows to be followed for case management, as well as an explanatory Word explaining each of the phases.

The main drawback we found was the lack of concordance and lack of knowledge that in some of the points were presented to our company by HIDRO, and that in many cases were modified, which made things change again what by then we had it set up.

This is an example of a case in HIDRO:

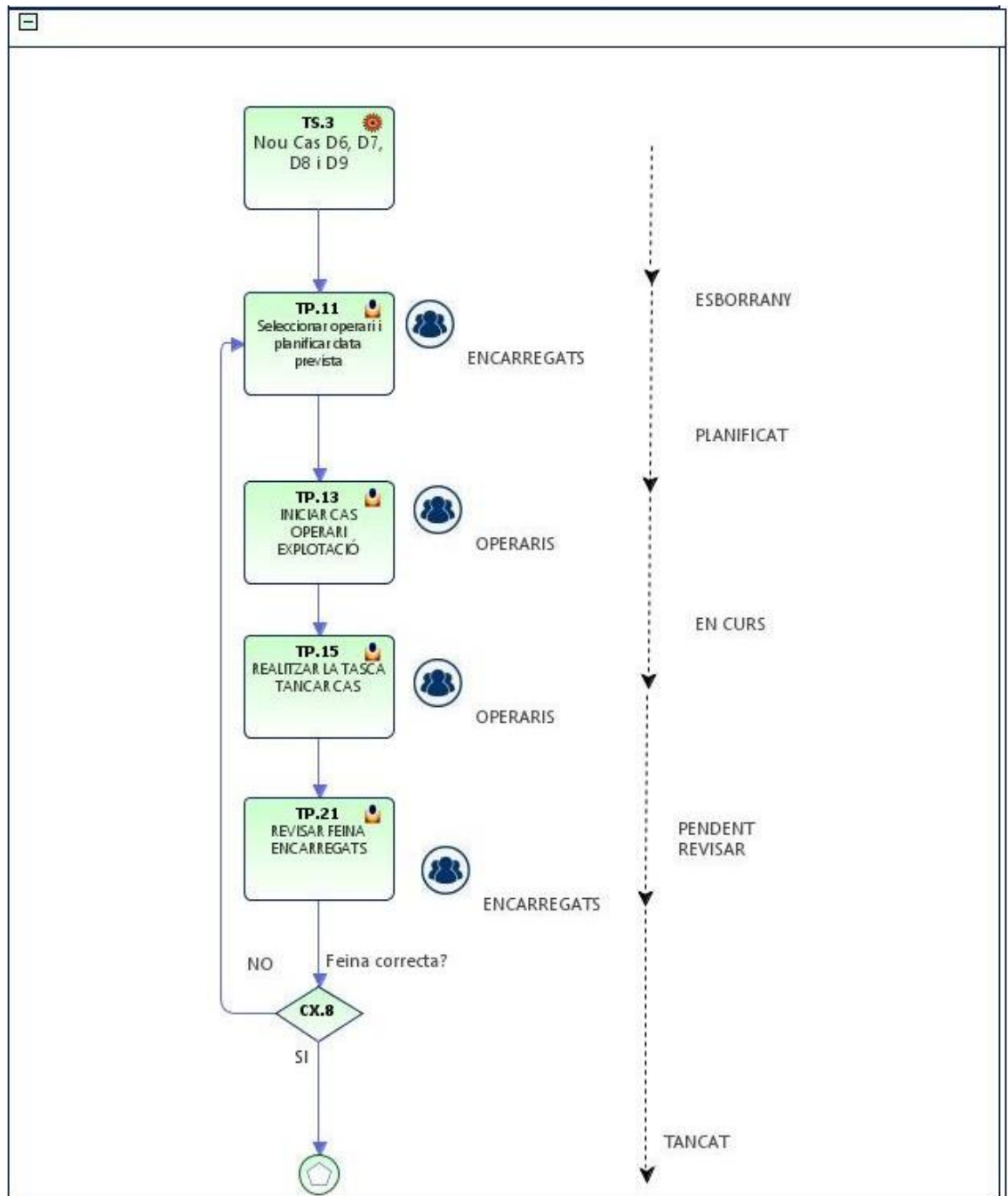


Figure 11. Case example .Source: HIDRO provides us with this case diagram

In figure 13 there is one example of a case showed in a diagram.

Along this diagram, HIDRO attached a word sheet explaining each stage of this case. Each stage in this diagram will be one stage in the CRM Business Process flow, as we can see in figure 12

The screenshot displays the CRM interface for case D6D7D8D9. At the top, a progress bar shows four stages: 'Esborrany' (marked with a red checkmark), 'Planificat (< 1 Min.)' (highlighted with a red circle), 'En Curs', and 'Pendent De Revisar'. To the right of the progress bar, the case details are listed: 'Normal' priority, '7/6/2020 20:22' creation date, 'Investigación' state, and 'Operaris' assigned user. Below the progress bar, a navigation menu includes 'Fitxa tècnica del cas', 'Llistat Activitats', 'Observacions', 'Relacions de casos', 'Informació d'articles i contractes', and 'Relacionados'. The main content area is divided into two columns. The left column, 'Identificació de la OT', contains fields for 'Títol del cas' (D6D7D8D9), 'Autor' (itr2), 'Data de creació' (7/6/2020), 'Tipus Cas PEUSA' (Actuacions a Xarxa), and 'Número del cas' (HL20002826). The right column, 'Detalls del Cas', contains fields for 'Client' and 'Subministraments Igsedis', both of which are redacted with black boxes. Below this, the 'DETALLS DEL CLIENT' section lists various client details, including 'Detalls de Client', 'IGSECOM', 'IGSEDIS', 'NIF Raó Social', 'Carrer', 'Localitat', and 'Telèfon', all of which are redacted with black boxes. At the bottom left, there is a section for 'Tasques programades' with a table for 'Activitats' and a 'Cas principal' field.

Figure 12. Case phases. Source: CRM 365

In each state, HIDRO indicates in the word sheet which fields do they want to see, and what requirements we will have to advance between stages.

Also, we can see that for example in the third stage, we need to assign this case to the security group in CRM called “Operaris” all of this is made automatically using CRM tools:

This screenshot is identical to the one above, showing the CRM interface for case D6D7D8D9 in the 'Planificat' stage. The key difference is in the top right corner, where the 'Operaris' user is now highlighted with a red box, indicating that the case has been assigned to this security group. The rest of the interface, including the progress bar, navigation menu, and data fields, remains the same as in Figure 12.

Figure 13. Security group. Source: CRM 365

When it comes to documenting the analysis phase, this is also important. The sessions that are carried out must be perfectly detailed in a functional document, where requirements and solution will be detailed. This document will be transferred to the person responsible for the client who will have to validate each of the requirements as well as the proposed solutions, and in case of disagreement, a detail of those that have not been accepted will be returned and reviewed until defined and validated each and every one of the points that make up the analysis.

When it comes to making requests, consultants have to ask all the necessary questions in order to know how they are managing so far, the data which they want to manage with the program that we will implement: CRM 365 and its extensions. And from here we will present the final solution, keeping in mind that what is within reach and what it is not.

Once this is done the consultants will contact the project technicians to communicate what data needs to be imported, what flows are needed etc.

In HIDRO, we can see the importance of this as most workflows (the processes in the cases) have needed development.

As this was not standard, the technicians needed to make a specific development for this.

Once, the whole team starts working, periodic checks need to be made, this usually includes a weekly meeting, depending on the client.

Sometimes, it happens that the client does not know exactly what he wants or what are the steps to be followed in order to achieve what they want.

Here we emphasize the importance of detail of all phases of the process, which depend not only on the work of our company, but also on how much the client will be involved with the project. The client is the one who knows how their employees usually work, and between them and our company we must decide how will their workstyle be adapted to CRM 365 and how CRM 365 will be adapted to them.

Once the functional analysis written by the consultant has been accepted and validated by the client, it will be transferred to the CRM technical department, which will be responsible for configuring the solutions proposed by the consultant.

Therefore, at the end of the analysis phase, the configuration of the environment according to the transmitted and accepted requirements begins.

As the environment is configured, all those advances that have been made in the configuration of the tool are presented periodically, and periodic validations are scheduled.

On HIDROS's scenario, these validations have been very present and necessary, because the way cases are configured and the development/configuration of processes were really complex. That required a gathering between our company and the employees from HIDRO who are now working on the cases, and in the future will work as well with cases but using CRM 365.

Periodic validations are made, and the project is submitted by chapters, and all the chapters together will be the final project.

Once the whole project is completed, a training is given.

5.3.7.1. TRAINING

The consultants will do all the training regarding CRM.

Key users (provided by HIDRO) who will be the ones who will use CRM 365, it is of high importance to train these people first.

At HIDRO, we can see that they have administration employees and electrical workers.

Here we must evaluate if the administration staff will be trained first, with different contents. This will be done in this way since the electrical workers will only use the cases, and administrative workers will be using many other configurations.

Generally speaking, the training is adapted to the roles of the future CRM 365 users.

5.3.7.2. START

The deployment is made during a few days or weeks, which are already defined in the Scope.

That will be the support to the start, where our company will give the maximum support because the client already is working with CRM 365 using his day to day activities. If any problem appears, our company needs to be ready to react immediately to solve it as fast as possible.

5.3.7.3. START-SUPPORT

Once the client started working, our company will be supporting them during a few weeks or days, that must be specified within the initial scope. That's going to be mainly for answering questions, and to solve any doubt that our client can have inside the first weeks of using CRM 365.

6. CONCLUSIONS

The machinery does not stop and the solution is implemented. The gear is already operating autonomously and everything is running smoothly. Following the appropriate methodology, each of the key pieces that have been developed and consolidated throughout the project take shape in the final solution that is presented to the client. Each CRM member who make up the team has made it possible for what was initially a phone call or an email to be transformed into a useful work tool for the Client. HIDRO begins its digital transformation with a Dynamics 365 solution, a solution that aims to be a before and after in the way of working and being able to extract the maximum potential of the information recovered in everyday life.

After analysing the whole cycle of a project, it's easy to think that it's just a matter of setting up and implementing the tool in a client's home. But anyone who thinks a project is this, and only this, will have a failed project. Implementing a project, and in CRM even more, goes much further, it's an equally important piece of gear, where none of them can fail. Planning cannot fail, nor can requirements, or presenting solutions, and configurations. Nor can the motivation of the team fail, nor the motivation that each of us can transmit to the Client when doing the trainings. Not even the constant attention and work can decrease and working hours and feedback with the client must always be continued. All of these are a set of factors that will make the difference between a successful project or a failure.

As already stated, the backbone of the whole project is the working methodology, and this is the one that serves as a guide and a starting point for each of the phases that must be carried out. That is because a structured project, where everyone knows at all times what to do, how to do it in faith and when to present and meet deadlines, is not only a good organization, but also a respect for customers that in the beginning and int the end is who is acquiring the solution that we present to them.

This project has led me to assess the implications of implementing a CRM in a company, as the changes that have been observed since the beginning are exponential. It provides a whole set of advantages that HIDRO employees did not have until then, if we consider that until then, case management and the customer service department were basically manual. From day 0, they can manage all their cases automatically, with artificial intelligence, they can manage activities from the same application, without having to duplicate the introduction of information in more than one system, thanks to the dual business unit support that the Dynamics 365 tool offers.

There are many benefits and advantages that the solution can bring, especially in the availability and monitoring of the data entered in the CRM. But we must not forget, and don't ignore, that one of the elements that also provides the CRM is the control of the work activity by those people of the company who acquire higher roles. That is because they will visualize from the same application, which are the managements, activities and cases that are carrying out all those people that have dependent of the its hierarchy.

Success is never guaranteed; failure can occur in any project, from the simplest to the most complex, but it is true that being part of this digital transformation is satisfactory when you observe that through your knowledge you are able to facilitate the day to day activities of a company and that at the same time, these facilities are rewarded in their profitability and an improvement in the management of the company.

On a personal level, being a member of our company's CRM team has been a great experience for me because I was able to combine my knowledge in computer science and in business administration. During my double degree I learned many programming languages, and it's good to see that the study throughout these years are helping me on my daily activities on my company, because I'm using some of these languages. Business administration also taught me how to be know how a company works, and when I see a budget for any project, I can tell if it is realistic. I am also confident using any financial application because I understand the financial aspects of the business work.

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